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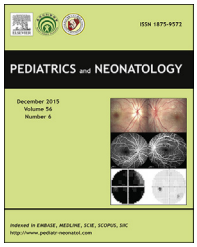

LETTER TO THE EDITOR

Critical Variables Affecting Cord Blood MPV and IMA Levels in Gestational Diabetic Mothers

Dear Editor,

In a recent issue of *Pediatrics & Neonatology*, Topaloğlu et al[1] reported the changes in cord blood mean platelet volume (MPV) and ischemia-modified albumin (IMA) levels of infants of diabetic mothers (IDMs).[1] The authors state that due to hypoxic conditions in pregnancy, an elevation in cord blood levels of IMA and MPV could be regarded as an evidence of danger to health. Moreover, the authors conclude that MPV and IMA are valuable tools for assessing oxidative stress in IDMs. Unfortunately, before interpretation of these study results, we think that several issues require clarification and further discussion.

First, it is uncertain from the present study whether the gestational diabetic mothers received any treatment during pregnancy. Lifestyle modifications with diet and exercise are the mainstay of treatment in gestational diabetes mellitus (GDM) and pharmacological interventions either with insulin or glyburide/metformin can be used to maintain euglycemia in 25% of patients.[2] Treatment with diet and insulin have been shown to have favorable effects on serum IMA levels and pregnancy outcomes in different studies. In view of these data, we believe that it is very important to give precise and clear treatment protocols of study participants during pregnancy, which could affect cord blood IMA levels.

Second, it seems that the authors do not consider the effect of multiple variables on MPV levels in cord blood. Assessing MPV levels in cord blood of GDM patients is a novel but poorly standardized method because of the difficulties in data interpretation. The largest study in the literature, which evaluated 10,577 units of cord blood in a public cord blood bank, demonstrated that MPV correlates with cord blood volume, hemoglobin, white blood cells, and ABO blood group.[3] For this reason, it would be important for the authors to mention the additional clinical and laboratory parameters of their patients, which could have an effect on the study results.

Third, in the first paragraph of the discussion section, the authors speculate that the elevation in IMA and MPV found in IDMs could be regarded as evidence of danger to human health. Unfortunately, findings from the present study are not sufficient to prove this kind of causal relationship. Moreover, despite a great number of studies that report either increased or decreased MPV and IMA levels in distinct disease states, there is insufficient evidence in the literature to determine whether these alterations cause any risk to human health. These alterations are almost always regarded as a result, not a cause.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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